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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,772	01/17/2002	Young-Ki Kim	6192.0249.AA	2680

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EXAMINER

NGUYEN, JENNIFER T

ART UNIT	PAPER NUMBER
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2674

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DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/046,772

Applicant(s)

KIM, YOUNG-KI

Examiner

Jennifer T Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Jeong et al. (U.S. Patent No. 6,271,816).

Regarding claims 1 and 8, referring to Fig. 1A, Jeong teaches a liquid crystal display, comprising: a liquid crystal panel including a plurality of gate lines (102), a plurality of insulated data lines (104, 105) crossing the gate lines (102), and a plurality of first thin film transistors (106) each having a gate electrode connected to a gate line (102) and a source electrode connected to a data line (104, 105); a gate driver for sequentially supplying a gate-on voltage to the gate lines (102) for turning on the thin film transistors (106); a data driver for applying a data voltage to the data lines (104, 105); a data line sharing switch having a plurality of switching devices (112), each of which formed between the adjacent data lines (104, 105) to connect and disconnect the adjacent data lines (104, 105); and a sharing signal generator for outputting a sharing control signal (i.e., neutralizer enable) for turning on the switching devices (112) (col. 1, lines 10-67, col. 5, lines 1-67, and col. 6, lines 1-31).

Regarding claim 2, Jeong further teaches the data line sharing switch is formed on the liquid crystal panel (col. 1, lines 16-67 and col. 6, lines 24-31).

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Regarding claim 3, Jeong also teaches that the switching devices (112) are second thin film transistors (col. 5, lines 35-36).

Regarding claim 4, Jeong teaches the second thin film transistors (112) are manufactured by the same process as the first thin film transistor (106) (Fig. 1A, col. 5, lines 1-67, col. 6, lines 1-31).

Regarding claim 5, Jeong teaches the data line sharing switch is placed at one end of the liquid crystal panel opposite to the data driver (Fig. 1A).

Regarding claims 6 and 9, Jeong further teaches the sharing signal generator applies a sharing signal pulse (i.e., neutralizer enable) for sharing the data lines (104, 105) between the gate-on voltages applied to adjacent gate lines respectively (col. 5, lines 1-67, col. 6, lines 1-31).

Regarding claims 7 and 10, Jeong teaches the sharing signal generator applies a sharing signal pulse for sharing the data lines (104, 105) after the voltage applied to the previous gate line (102) turns to a gate-off voltage (col. 5, lines 1-67, col. 6, lines 1-31).

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Kitamura (U.S. Patent No. 5,682,175) teaches data driver generating two sets of sampling signals sequential sampling mode and simultaneous sampling mode.

Kwon (U.S. Patent No. 6,124,840) teaches LCD with low power gate driver circuit for TFT-LCD using electric charge recycling technique.

Matsuda et al. (U.S. Patent No. 5,886,679) teaches driver circuit for driving LCD.

Kwon (U.S. Patent No. 6,575,881) teaches method for driving the TFT-LCD using multi-phase charge sharing.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jennifer T. Nguyen** whose telephone number is **703-305-3225**.

The examiner can normally be reached on Mon-Fri from 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reach at **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC. 20231

Or faxed to: 703-872-9306 (for Technology Center 2600 only)


Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, sixth-floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is 703-306-0377.

Jennifer T. Nguyen

09/22/2003

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RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600